

Application No.: 10/781174
Amendment dated: May 12, 2008
Reply to Office action of Feb. 12, 2008

REMARKS/ARGUMENTS

The rejection under 35 U.S.C. §112, first paragraph, was directed to the new limitations added in the amendment filed December 14, 2007. Support for these limitations is found in the specification and drawings as follows:

1. "inlet opening for flow of air into the enclosure" - openings 58 and 60 in FIG. 2 and the description at paragraph 0032.
2. "through said inlet opening" - paragraph 0033, lines 4-6.
3. "at a rate depending on the internal temperature of said food article as sensed by said second temperature sensor after the internal temperature of said food article reaches a predetermined level" - paragraph 0047, lines 18-21
4. first "manually operable" adjuster - paragraph 0038 ("Potentiometer 94 supplies a meat temperature set point" and is "set manually".)
5. second "manually operable" adjuster - paragraph 0038 ("potentiometer 96 supplies a pit temperature set point" and is "set manually".)
6. enclosure when closed is "substantially free of openings other than said inlet opening, thereby avoiding paths for convective flow." - paragraph 0016

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To address the first rejection under 35 USC §112, paragraph 2, the extraneous word "being" has been deleted from claim 1. To address the second ground, claims 7 and 14 have been amended to define more clearly the structure that ensures the effectiveness of the impeller. The Examiner raised the question as to whether or not the claim language permits other openings. Indeed, there can be openings other than the inlet opening where the impeller is located: e.g., exhaust ports in the pit cover (paragraph 0034). The new language in claims 7 and 14 expresses the essential feature more accurately, by reciting that "when said enclosure is closed, the only opening in said enclosure through which substantial amounts of external air can flow to said fuel supporting area, is said inlet opening." The term "substantial" in this context is necessary in order to allow for some minor convective flow of air through incidental paths other than through the inlet opening through which air is caused to flow by the impeller. The use of the term "substantial" does not affect the definiteness of the claim. One having ordinary skill in the art could readily determine whether or not a substantial amount of by-pass air flow is taking place; the cycling of the impeller would become ineffective to control pit temperature.

Claim 1 has been amended to distinguish the invention more clearly from the prior art, and particularly from Wollich, which was relied upon for a controller reducing a set point temperature at a rate based on the internal temperature of the food.

What happens in Wollich is that the meat is first cooked at a preset oven temperature until a predetermined internal meat temperature is reached. Then, the oven temperature is allowed to fall gradually to a holding temperature of 138°F,

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and held at that temperature. What is important here is that Wollich's heating element is not activated during the interval between the time the predetermined internal meat temperature is reached and the time the oven temperature reaches the 138°F holding temperature. Although Wollich says, at column 1, lines 43-45 that the oven temperature is automatically gradually reduced for "several hours," it is clear from the remainder of the description that the reduction takes place solely by heat loss, presumably slowed by good oven insulation, and without operation of the heating element. That the heating element is not operated during the temperature reduction interval is apparent from Wollich's description at column 5, lines 22-34:

"The oven will thereby be regulated and maintained at the preset temperature until the internal temperature of the meat, as designated by the probe T_m reaches a certain level. When that occurs, the relay contacts C_A in FIG. 3 will open and the relay contacts C_H will close, so that *no further pulses V_o* will be generated by the oven temperature module of FIG. 3 until the oven temperature gradually drops to the holding level of, for example, 138°F. The oven temperature module will now regulate and control the oven temperature to hold it at the level of 138°F until the meat is removed and the system reset." (emphasis supplied)

In other words, the drop in oven temperature to 138°F is dependent entirely on heat loss; no heat is added by the heating element until the oven reaches the holding level of 138°F.

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The problem with the previous version of claim 1 was that it recited only that the set point temperature was reduced at a rate depending on the internal temperature of the food article. In Wollich, the rate of reduction of oven temperature was also dependent on meat temperature, in the same sense that the rate reduction of any exponentially decaying variable is dependent on an initial value of the variable. In other words, if the meat is hotter when the oven is turned off, its rate of cooling will be greater.

What is missing from Wollich is a controller that *regulates* the oven set point temperature over the cooling interval. In particular, Wollich lacks the following feature now recited in claim 1:

"said controller . . . regulating, over an interval of time, the rate at which the set point temperature is reduced in dependence on the internal temperature of said food article. . . said interval of time beginning with a time at which the internal temperature of said food article reaches a predetermined level."

There is no corresponding regulation over an interval of time in Wollich; the drop in oven temperature is unregulated and is instead dependent on an initial temperature and heat dissipation.

Essentially the same reason applies to claim 8 as amended, and to new claim 24. Claim 8 recites:

"a controller. . .for operating said impeller. . . and, by regulating the operation of said impeller over an interval of time, reducing said set point . . . at a rate

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depending on the internal temperature of said food article . . . said interval of time beginning with a time at which the internal temperature of said food article reaches a predetermined level."

Claim 24 recites:

"a controller. . . regulating the duty cycle of the electric motor in response to the internal temperature of the food article, thereby causing the temperature of said atmosphere to decrease gradually at a rate depending on the internal temperature of the food article."

Here again, claim 24 calls for a controller that causes a temperature to decrease by regulation; a feature missing in Wollich.

New dependent claims 22 and 23, which are dependent respectively on claims 1 and 8, add another feature that is entirely missing in Wollich (and in the other prior art). These claims qualify the controller of their parent claims by reciting a manually operable adjuster and by reciting that the

"predetermined level of the temperature of said food article" (at which the controller begins to regulate the rate of reduction of the set point temperature) is a temperature "below . . . [a manually set] target temperature and differing by the same predetermined amount from the target temperature as set by said manually operable adjuster for any setting of said manually operable adjuster. "

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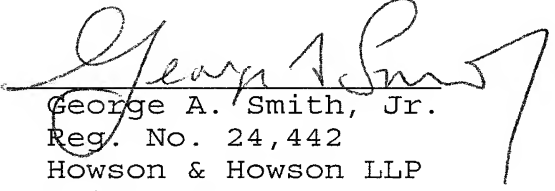
Wollich not only has no food temperature responsive regulation of the rate of decline of oven temperature, but also has no feature whereby the decline is initiated at a food temperature below a set target temperature by the same predetermined amount regardless of the set target temperature.

Finally, concerning the question of whether or not Wollich's apparatus is capable of being controlled in the claimed manner, there is nothing in Wollich's description that indicates that the apparatus could be made to regulate the decline in oven temperature in response to internal food temperature over an interval beginning with the point at which the internal temperature reaches a predetermined level.

Accordingly, we respectfully submit that the prior art does not demonstrate obviousness of the subject matter presently claimed, and request reconsideration and allowance of this application.

Respectfully submitted,
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